

**FINDING OF NO SIGNIFICANT IMPACT
FOR
SUNNY MEADOWS COUNTY WATER & SEWER DISTRICT
WATER SYSTEM IMPROVEMENTS**

TO: ALL INTERESTED PERSONS

Date: February 5, 2008

Action: Water System Improvements Including:
New 125,000-Gallon On-Grade Steel Water Storage Reservoir
New Boost Pump Facility
New Well Pumps and Appurtenances including Controls, Valves, and Pump House Piping
Water Meters as Required to Provide for a Fully Metered System
New Distribution System Valves and Fire Hydrants
Abandonment of Existing Boost Pump Facility and Concrete Storage Reservoir

Location of Project: Sunny Meadows County Water & Sewer District
Missoula County, Montana

DEQ Funding: \$ 180,000
Total Project Cost: \$ 669,500

An environmental review has been conducted by the Montana Department of Environmental Quality (DEQ) for proposed funding for improvements to the Sunny Meadows County Water & Sewer District's water system. The proposed project involves the construction of improvements as listed above. The purpose of the project is to make improvements to the drinking water system that are needed to protect public health.

The affected environment will primarily be the area within the boundaries of the Sunny Meadows County Water & Sewer District and the immediate vicinity. The human environment affected will include the public water system and the 53 residences located within the District. Based on the environmental assessment, the project is not expected to have any significant adverse impacts upon terrestrial and aquatic life or habitat including endangered species, water quality or quantity, air quality, geological features, cultural or historical features, or social quality.

This project will be funded with District reserves, grants, and a low interest loan through the Montana Drinking Water State Revolving Fund Loan Program, administered by the Montana Department of Environmental Quality (DEQ) and the Montana Department of Natural Resources and Conservation (DNRC).

The DEQ utilized the following references in completing its environmental review of this project: a Uniform Environmental Checklist for Montana Public Facility Projects and a Preliminary Engineering Report dated April, 2006, both by Great West Engineering, consulting engineer for Sunny Meadows County Water & Sewer District; and an environmental checklist completed by the DEQ. In addition to these references, letters were sent to: the Montana Department of Environmental Quality (DEQ); the Montana Department of Fish, Wildlife & Parks (DFWP); the Montana Department of Natural Resources and Conservation (DNRC); the United States Fish and Wildlife Service (USFWS); the United States Army Corps of Engineers (USACE); the Montana State Historic Preservation Office (SHPO); the Montana Natural Heritage Program (MNHP); and the Natural Resource Conservation Service (NRCS). Responses have been received from DEQ, DFWP, SHPO, MNHP, and NRCS. These references are available for review upon request by contacting:

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or

Mike Lilley
Sunny Meadows Co. W&SD
4200 Old Marshall Grade Rd.
Missoula, MT 59802
(406) 327-6710

Comments on this finding or on the EA may be submitted to DEQ at the above address. Comments must be postmarked no later than March 15, 2008. After evaluating substantive comments received, DEQ will revise the EA or determine if an EIS is necessary. Otherwise, this finding of no significant impact will stand if no substantive comments are received during the comment period, or if substantive comments are received and evaluated and the environmental impacts are still determined to be non-significant.

Todd Teegarden, P.E., Chief
Technical and Financial Assistance Bureau

SUNNY MEADOWS COUNTY WATER & SEWER DISTRICT
DRINKING WATER FACILITIES

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Sunny Meadows County Water & Sewer District
Address: 4200 Old Marshall Grade Road
Missoula, MT 59802
Project Number: WRF 10-002

B. CONTACT PERSON

Name: Mike Lilley, Board President
Sunny Meadows County Water & Sewer District
Address: 4200 Old Marshall Grade Road
Missoula, MT 59802
Telephone: (406) 327-6710

C. ABSTRACT

Sunny Meadows County Water & Sewer District is located adjacent to Old Highway 10 approximately four miles east of Missoula. The subdivision is located in Section 13, Township 13 North, Range 19 West; and in Section 18, Township 13 North, Range 18 West. Formed in 2006, the District owns and operates a public water system for the subdivision providing service to 53 residential customers. The system was originally constructed in 1979. All properties within the district utilize individual or shared septic tanks and drainfields for wastewater treatment and disposal. The water system for the community consists of two wells; a 40,000-gallon concrete storage reservoir that is in poor condition and, due to design, provides only 23,000 gallons of usable storage; a boost pump facility that serves four (4) households; a distribution system that is in generally satisfactory condition; and operational water meters for approximately 30 households. The District is planning improvements to its drinking water system to address the following deficiencies:

1. The wells do not provide enough water to meet Circular DEQ-1 requirements for maximum daily demands with the largest producing well out of service;
2. At 23,000 gallons of usable storage, the existing storage reservoir does not provide adequate storage to meet minimum requirements for daily demand and fire flow;
3. The system does not provide adequate flow or pressure to all customers during periods of high demand;
4. Pump controls and appurtenances are obsolete in that they do not allow for alternate or lead/lag operation, do not include an alarm or other warning device to notify the operator of failure; do not include hour meters; and are generally in need of upgrades or replacement; and
5. Because not all customers are currently metered, water meters are not being utilized at service connections to promote water conservation and provide for a fair method of billing.

The recommended alternatives from the preliminary engineering report include the following improvements:

1. Increase the water supply by installing new submersible pumps in the existing wells; recent decreases in the water table level due to the permanent draining of nearby Milltown Reservoir may lead to the abandonment of the existing wells and the drilling of two (2) new wells. No adverse environmental impacts are anticipated should this occur. In the event this does occur, the new pumps would be installed in the new wells, and the existing wells would be properly abandoned.
2. Replace 22 non-operational or obsolete residential water meters to provide metered service to all customers;
3. Upgrade pump controls, piping, and valving;
4. Install hour meters so pump operation can be monitored;
5. Replace the existing boost pump facility to provide adequate pressure to all service connections; and
6. Abandon the existing storage reservoir and construct a new 125,000-gallon on-grade steel storage reservoir.

The proposed water system improvements will ensure that drinking water meeting state and federal regulations is provided to all homes within the District.

The project will be funded by grants through the Montana Department of Natural Resources and Conservation Renewable Resource Grant and Loan Program, the Montana Department of Commerce Treasure State Endowment Program, local District funds, and a State Revolving Fund loan. Environmentally sensitive issues and features such as wetlands, floodplains, and threatened or endangered species are not expected to be adversely impacted as a consequence of the proposed project. No significant long-term environmental impacts were identified.

D. COMMENT PERIOD

Thirty (30) calendar days.

II. PURPOSE AND NEED FOR ACTION

A. DRINKING WATER SUPPLY, STORAGE, AND DISTRIBUTION SYSTEMS

The Sunny Meadows Subdivision consists of 53 residential and no commercial connections. Water service is provided by a public system consisting of two wells, an undersized storage reservoir, a boost pump facility providing pressure to four connections, and a satisfactory distribution system consisting primarily of 6" PVC pipe. The system was constructed in the late 1970's. Since that time, no major improvements have been made.

The two supply wells do not have adequate capacity to meet peak demands without storage, which is approximately 100,000 gallons short of the minimum required capacity of 123,180 gallons necessary to meet high demand and fire flow requirements. The distribution system is satisfactory. The boost pump facility does not meet Circular DEQ-1 standards; pumps and controls associated with the two (2) wells are in need of replacement; and valve house piping and instrumentation must be upgraded to meet both operational and regulatory requirements.

Additionally, the system does not utilize water meters to promote water conservation and provide for a fair billing system based upon actual water use.

B. PROPOSED PROJECT

The proposed project includes the following improvements:

1. The replacement of pumps, controls, instrumentation, and other appurtenances for both wells (Note that drops in the water table resulting from the permanent draining of nearby Milltown Reservoir may necessitate the drilling of two (2) new wells and the abandonment of the existing two (2) wells. This work is not included within the scope of work for this project);
2. The installation of 22 new water meters. This will provide for operational meters at all of the service connections within the subdivision and will facilitate an efficient and fair method of customer billing with water conservation benefits provided;
3. The abandonment of the existing boost pump facility and construction of a new boost pump facility at the new storage reservoir; and
4. The abandonment of the existing storage reservoir and construction of a new 125,000-gallon on-grade steel storage reservoir.

Adequate water supply, storage, and distribution are important to the public health and safety of the residents of Sunny Meadows County Water & Sewer District. Without these, water quality and public health and safety will be at risk.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. WATER SUPPLY ALTERNATIVES

Four alternatives addressing the District's water supply needs included:

1. Install new well pumps and make valve house piping improvements;
2. Drill new wells, install new well pumps, and make valve house piping improvements;
3. Connect to Mountain Water Company, an investor-owned Public Service Commission regulated water utilities company that supplies water to the nearby City of Missoula and portions of the surrounding area; and
4. No action.

1. INSTALL NEW WELL PUMPS AND MAKE VALVE HOUSE PIPING IMPROVEMENTS-

This alternative would increase the water supply from the existing wells to meet maximum day demands by installing new submersible pumps in the existing wells. The District currently has the water right for the needed increase. It has also been determined by prior hydrogeological investigations that the wells can easily produce the needed volume of water. A project that is underway and removes nearby Milltown Dam and drains Milltown Reservoir may result in a drop in the groundwater table, necessitating the abandonment of these wells and the drilling of deeper replacement wells. This work is not included in the scope of this project, and would be done by the United States Environmental Protection Agency (EPA), the agency responsible for the removal of the dam. Should this occur, the new pumps would be installed in the new wells and the existing wells would be abandoned. Based on hydrogeologic information current at the time of this environmental assessment, installing new pumps in the existing wells is the preferred

alternative and could be easily modified to consist of the installation of new pumps in new wells drilled by EPA.

2. **DRILL NEW WELLS, INSTALL NEW WELL PUMPS, AND MAKE VALVE HOUSE PIPING IMPROVEMENTS-** This alternative would increase the water supply to meet maximum day demands by drilling new wells and installing new submersible pumps in the new wells. The District currently has the water right for the needed increase. Because of the increase in capital cost over Alternative 1. above, this is not the preferred alternative. See the explanation provided with Alternative 1. above regarding the possible drilling of new wells as necessitated by the draining of Milltown Reservoir. Should this become necessary, this becomes the preferred alternative; however, the cost of the new wells would be borne by EPA, and the drilling of the new wells would not be within the scope of the work being evaluated in this environmental assessment.
3. **CONNECT TO MOUNTAIN WATER COMPANY-**This alternative would resolve all of the problems associated with supply, storage, and distribution problems associated with the system. However, under this alternative, Mountain Water would become the owner of the District's system, and grant funding through state and federal programs would be unavailable. Additionally, the cost of providing a transmission main for approximately four miles into Missoula is prohibitive; for these reasons, this alternative was eliminated from further consideration.

B. WATER STORAGE ALTERNATIVES

Five alternatives addressing the District's water storage needs included:

1. Abandon the existing reservoir and construct a new 125,000-gallon on-grade steel reservoir;
 2. Construct a new 85,000-gallon on-grade steel reservoir and continue to use the 40,000-gallon storage reservoir (This alternative would require modifications to the existing reservoir to increase its useful capacity from 23,000 gallons to its design capacity of 40,000 gallons);
 3. Abandon the existing reservoir and construct a 125,000-gallon buried concrete reservoir;
 4. Connect to Mountain Water Company; and
 5. No action.
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1. **ABANDON THE EXISTING RESERVOIR AND CONSTRUCT A 125,000-GALLON ON-GRADE STEEL RESERVOIR-**This alternative will resolve all of the problems associated with storage capacity. The new tank would be installed on the highest ground owned by the District and will provide pressures to all areas served by gravity within the subdivision to fall within the pressure range required by DEQ, 35 psi to 80 psi. The new reservoir would be about 28' in diameter and 27' high. Although slightly more expensive than Alternative 2., this alternative provides the elevation head required to increase system pressures to the required minimums, while Alternative 2. does not. For this reason, this is the preferred alternative.
 2. **CONSTRUCT A NEW 85,000-GALLON ON-GRADE STEEL RESERVOIR AND CONTINUE TO USE THE 40,000-GALLON STORAGE RESERVOIR-**This alternative will resolve all of the problems associated with storage capacity. However, this alternative does not provide the necessary elevation head to alleviate low-pressure problems associated with the existing system and is not being considered.

3. ABANDON THE EXISTING RESERVOIR AND CONSTRUCT A 125,000-GALLON BURIED CONCRETE RESERVOIR-This alternative will resolve all of the problems associated with storage capacity. However, the present worth cost of this alternative exceeds the present worth cost of Alternative 1. by nearly 50%, and has been removed from further consideration.

4. CONNECT TO MOUNTAIN WATER COMPANY-Refer to Water Supply Alternative 3. above.

5. NO ACTION-This action would make no changes to the existing storage capabilities of the system. The existing storage for the system is deficient by approximately 100,000 gallons. Resultingly, this alternative would not meet the needs of the District and has been removed from further consideration.

C. WATER DISTRIBUTION SYSTEM ALTERNATIVES

Two alternatives addressing the District's water distribution needs included:

1. Replace the existing boost pump facility and make improvements to the existing distribution lines to include new valves, fire hydrants, and meters to provide a fully metered system; and
2. No Action

1. REPLACE THE EXISTING BOOST PUMP FACILITY AND MAKE IMPROVEMENTS TO THE EXISTING DISTRIBUTION LINES TO INCLUDE NEW VALVES, FIRE HYDRANTS, AND METERS TO PROVIDE A FULLY METERED SYSTEM-This alternative will completely resolve the safety and health issues relating to the distribution system deficiencies and is the only acceptable alternative.
2. NO ACTION-This alternative was not seriously considered beyond the initial screening stage. The existing distribution system fails to provide adequate flows and pressures to all customers within the District. Valves and hydrants have served their useful lives, and the existing boost pump facility does not meet operational or regulatory standards.

D. COST COMPARISON - PRESENT WORTH ANALYSES

The present worth analysis is a method of comparing alternatives in present day dollars and is used to determine the most cost-effective alternative. Capital cost is first adjusted by subtracting the present worth of the salvage value at the end of 20 years. The present worth value of the annual operating and maintenance costs is calculated assuming a 6.0% interest rate over the 20-year planning period. The present worth of the annual operation and maintenance costs is then added to the adjusted capital cost to provide the total present worth cost of each alternative. These values are compared to determine the most cost-effective alternative.

1. Table 1 provides a summary of the present worth analysis of the water supply alternatives that were considered following the alternative screening process.

Table 1. Present Worth Analysis for Water Supply Alternatives

	Water Supply Alternatives				
	Alt. 1 Install New Pumps in the Existing Wells	Alt. 2 Install New Pumps in New Replacement Wells			
Capital Cost (2006)	\$63,450	\$167,535			
20-Year Salvage Value	\$9,000	\$30,000			
Present Worth of Salvage Value (6.0%)	\$2,800	\$9,400			
Annual O&M Costs	\$8,800	\$8,800			
Present Worth of Annual O&M Costs (6.0%)	\$100,900	\$100,900			
Total Present Worth Cost	\$145,100	\$215,600			

2. Table 2 provides a summary of the present worth analysis for water storage alternatives.

Table 2. Present Worth Analysis for Water Storage Alternatives

	Water Storage Alternatives				
	Alt. 1 Replace Existing with 125,000 Gallon Steel Tank	Alt. 2 Retain Existing and Add New 85,000 Gallon Steel Tank	Alt. 3 Replace Existing with 125,000 Gallon Concrete Tank		
Capital Cost (2006)	\$315,800	\$275,800	\$547,050		
20-Year Salvage Value	\$113,000	\$97,000	\$288,000		
Present Worth of Salvage Value (6.0%)	\$35,200	\$30,200	\$89,800		
Annual O&M Costs	\$7,300	\$7,700	\$5,900		
Present Worth of Annual O&M Costs (6.0%)	\$83,700	\$88,300	\$67,700		
Total Present Worth Cost	\$364,300	\$333,900	\$524,950		

3. Table 3 provides a cost summary of the cost to replace the existing boost pump facility and upgrade the distribution system to include new valves, fire hydrants, and water meters as required to provide a fully metered system. This was the only alternative considered since the no-action alternative will not correct the water pressure and flow deficiencies that currently exist.

Table 3. Cost Summary for Water Distribution System Improvements

	Water Distribution System Alternatives				
	Alternative 1 Replace Existing Boost Pump Facility; Install 22 Water Meters; Replace Valves and Fire Hydrants				
Construction Cost (2006)	\$83,700				
Non-Construction Costs including Project Administration, Engineering Costs, and 10% Contingency	\$29,295				
Total Cost	\$112,995				

E.. TOTAL ESTIMATED COSTS

The total estimated cost of the project is \$669,500, broken down as follows:

Administrative and Financial Costs:	\$ 40,500
Land Acquisition Costs:	\$ 0
Engineering Costs, including Inspection	\$ 128,000
Construction Costs	\$ 459,000
Construction Contingency	<u>\$ 42,000</u>
Total Estimated Cost	\$ 669,500

F. USER COSTS AND AFFORDABILITY

The current average monthly residential water rate within the District is \$58.00. This project will require a loan in the approximate amount of \$180,000, resulting in a projected average rate of \$59.95 per month.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA DESCRIPTION

The Sunny Meadows County Water & Sewer District is located approximately four miles east of Missoula. The subdivision is located north of Old Highway 10 and includes 53 residential lots with no commercial development.

B. PROPOSED PROJECT SUMMARY

The proposed project includes upgrades to an existing system that was constructed in the late 1970's. The source of water for the system is groundwater provided by two wells; storage is provided by a 40,000-gallon concrete reservoir that, by design, only provides 23,000 gallons of usable storage.

Included in this proposed project are the replacement of the submersible pumps, controls, and associated piping/valving for both wells; the replacement of a sub-standard boost pump facility that does not meet regulatory requirements; the replacement of valves and fire hydrants associated with the distribution system; the installation of water meters to provide for metered service at all connections; and the replacement of the existing water storage reservoir with an on-grade 125,000-gallon steel tank.

Plans are currently being reviewed by the Montana Department of Environmental Quality for compliance with Circular DEQ 1, and construction is scheduled for the summer of 2008.

C. POPULATION PROJECTIONS AND PROJECT DESIGN CRITERIA

Population projections for the 20-year design period indicate that little growth is anticipated for the project area because the subdivision is completely developed. A 10% unanticipated growth factor has been incorporated into the design to allow for a reasonable amount of growth.

Design Year:	2026
Number of Hookups	53
Projected Population	158
Average Demand Per Capita	210 gallons per capita per day
Design Average Daily Demand	33,180 gallons per day
Daily Peaking Factor	3.5
Design Peak Daily Demand	116,130 gallons per day
Hourly Peaking Factor	5.0
Peak Hourly Demand	115 gallons per minute

D. NATURAL FEATURES AND LAND USE WITHIN THE PLANNING AREA

The immediate land use within the District is residential. The community is bordered on the south by the Clark Fork River and the community of East Missoula; to the north, west, and east, the District is bordered by mountainous terrain with some scattered agricultural land and low-density residential development.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Housing and Commercial Development – Land use within the district boundaries is totally residential. It is not anticipated that this project will have a significant impact on existing or future growth since the subdivision is fully developed.
2. Future Land Use – Land use within the District boundaries is residential. Because the subdivision is completely developed, land use within the planning area is not expected to change significantly in the future. No adverse impacts to land use are expected from the proposed project.
3. Floodplains and Wetlands –No significant impacts are anticipated.
4. Cultural Resources –No significant impacts are anticipated. In the event that cultural artifacts are encountered during construction, the Montana State Historic Preservation Office will be notified.
5. Fish and Wildlife – The U.S. Fish and Wildlife Service and the Montana Department of Fish, Wildlife, and Parks were both contacted to identify any unique resources within the project area. No long-term adverse impacts are anticipated..
6. Water Quality – No long-term adverse impacts are anticipated.
7. Air Quality - Short-term negative impacts on the air quality will occur from heavy equipment, dust, and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be implemented during construction to control dust, thus minimizing this problem.
8. Public Health – The proposed project is not expected to have adverse impacts on public health and should, instead, enhance public health by providing a safe and reliable water supply for the community.
9. Energy – Because of improvements in the efficiency of the new replacement pumps and controls in both supply wells, long-term power savings are anticipated.
10. Noise - Short-term impacts from increased noise levels may occur during construction of the proposed project improvements. No long-term adverse impacts are anticipated.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction impacts including noise, dust, and traffic disruption will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided.

VI. PUBLIC PARTICIPATION

A formally advertised public hearing was held to inform the public of the proposed project and solicit comments on March 9, 2006. There is no known opposition to the project, and there is documented support for the project from homeowners within the community.

VII. REFERENCE DOCUMENTS

The following documents were utilized in the environmental review of this project and are considered to be part of the project file:

- A. Preliminary Engineering Report-Water System Improvements; April 2006; prepared by Great West Engineering, Helena, Montana.
- B. Draft Contract Documents & Specifications; January 2008; prepared by Great West Engineering, Helena, Montana.
- C. Draft Construction Drawings for the Sunny Meadows County Water & Sewer District Water System Improvements; prepared by Great West Engineering, Helena, Montana.

VIII. AGENCIES CONSULTED

The following agencies were contacted regarding the proposed construction of this project:

- A. The Montana Natural Heritage Program
- B. The Natural Resource Conservation Service
- C. The Montana Department of Environmental Quality
- D. The Montana Historical Society's Historic Preservation Office
- E. The Montana Department of Natural Resources and Conservation
- F. The Montana Department of Fish, Wildlife, and Parks
- G. The U.S. Fish and Wildlife Service
- H. The U.S. Army Corps of Engineers

No adverse comments were received.

IX. APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

No additional permits will be required from the Drinking Water State Revolving Fund Program of the Department of Environmental Quality for this project after review and approval of the submitted plans and specifications. However, a stormwater general discharge permit for construction activities must be obtained from the department's Water Protection Bureau prior to the beginning of construction. A construction dewatering permit from the department's Water Protection Bureau may also be required if groundwater is encountered during construction of the new facilities and dewatering activities are necessary.

X. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

Rationale for Recommendation: Through this environmental assessment, the department has made a preliminary determination that none of the adverse impacts of

the proposed Sunny Meadows County Water & Sewer District water system improvements project are significant. Therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607, 17.4.608, 17.4.609 and 17.4.610.

The environmental assessment is the appropriate level of analysis because none of the adverse effects of the impacts are expected to be significant.

EA prepared by:

Mark A. Smith, P.E.

Date

EA reviewed by:

Marc Golz, P.E.

Date